

Remarks

The Office Action rejected claims 1-5, 7 and 8 under § 103 based on WO 01/42415 ("Ashcroft et al.") in view of WO 99/53915 ("Kjelleberg et al."), rejected claims 1-8 under § 103 based on WO 99/03959 ("Weber et al.") in view of Kjelleberg et al., and rejected claims 1-5, 7 and 8 under § 103 based on U.S. patent 5,776,876 ("Garris") in view of Kjelleberg et al.. In view of the amendment above and remarks below, reconsideration is respectfully requested.

Restriction Requirement

The restriction requirement is believed moot in view of cancellation of claims 9-16. In any event, the Office Action was correct that the cancellation of claims 9-16 was an election without traverse.

Preliminary Matters

Applicants note a paragraph on page 2 of the Office Action headed "Claim Rejections - 35 USC § 102". However, no § 102 rejections were made in the Office Action. Applicants have therefore responded as if all rejections were intended as § 103 rejections only.

Art Rejections

The present amendment incorporates a portion of the subject matter of claim 3 (acid) into claim 1. Further, it clarifies the nature of the poly D-glucosamine as chitosan itself (as distinguished from a salt thereof or a derivative thereof). Also, it takes the resulting claim 6 and then presents it in independent form.

Moreover, the cleaners of the present invention are now expressly specified as being capable of inhibiting bacterial growth after cleaning with it. This is the unexpected and surprising residual benefit advantage emphasized at paragraphs 47 and 48 of the application.

Applicants believe that the cited art does not render the presently claimed invention (now remaining amended claims 1-8) anticipated or obvious for among other reasons the following:

A. WO 01/42415 and WO 99/53915

Ashcroft et al. bears a publication date (June 14, 2001) that is less than one year before Applicants' filing date of October 26, 2001. As such, Applicants reserve the right to consider further whether to swear behind this reference. However, for purposes of this response Applicants will respond as if Ashcroft et al. were prior art.

The Office Action did not apply the above two references against claim 6. Thus, independent claim 6 should be considered free of that art. With respect to amended claims 1-5, 7 and 8 Applicants respectfully contend that the teachings of Ashcroft et al. and Kjelleberg et al. do not render those claims obvious.

~~First, these claims now make clear that chitosan itself~~
is being referred to. See original claim 2 and paragraph 49 for the most preferred nature of that poly D-glucosamine. Chitosan itself is highly advantageous as it is naturally occurring, inexpensive and particularly environmentally friendly. While Ashcroft et al. describes a chitosan salt and several chitosan derivatives, it does not describe chitosan itself used for that purpose.

In any event, the Office Action acknowledges that a hard surface cleaner having an acidic pH is not exemplified in the Ashcroft et al. reference, the Office Action instead relies on comments on page 29 of that reference regarding the suitability of low pHs for some formulations. However, that same section indicates that when the compositions of that PCT publication are formulated with surfactants as surface cleaning compositions that it is preferred for there to be a mildly alkaline formulation.

This is a teaching away from the pH below 6 when a surfactant is present and the material is for hard surface cleaning. Moreover, that same paragraph teaches even more strongly away from use of a variety of organic acids (e.g. claim 3).

Apart from these differences, the claims have now been still further amended to focus on the surprising and unexpected residual antimicrobial effect. That is nowhere taught or enabled in Ashcroft et al.. Further, as recognized in the Office Action, Ashcroft et al. teaches nothing about the use of particular types of furanones.

Kjelleberg et al. does teach the use of furanones in certain cleaners. However, it does not cure many of the above recited other deficiencies in the Ashcroft et al. reference. For example, nothing in Kjelleberg et al. teaches using chitosan itself for a hard surface cleaner, or suggests the compatibility of chitosan and furanones, or teaches the conditions under which both chitosan and furanone could have antimicrobial effectiveness.

Further, nothing in the reference suggests that furanones could be used in compositions having residual antimicrobial effect. Also, Kjelleberg et al. does not address the pH/additional acid deficiency. If anything, the buffering referred to on page 9 of the reference would seem to indicate that pH extremes were not intended.

B. WO 99/03959 and WO 99/53915

As Weber et al. is not primarily in English, Applicants have obtained the English language U.S. counterpart (6,362,142), a copy of which is enclosed. Applicants understand that the PTO is interested in reviewing a translation of this document. To the extent this request was directed to Applicants, Applicants do not have one. However, they assume that the enclosed U.S. counterpart will suffice.

As can be seen from the U.S. counterpart, the Weber et al. reference does not mention pH. However, the Office Action asserts that the taught compositions would inherently have an acidic pH. Applicants respectfully traverse that finding.

The exemplified compositions in Weber et al. were designed for dermatological compatibility so as to avoid even particularly sensitive consumers experiencing skin irritation

(see column 1, lines 20-24 and column 12 beginning at line 25). The requirement for avoiding skin irritation suffered by even highly sensitive consumers argues against an acidic pH.

Further, the Weber et al. reference did not teach the separate acid additive now claimed in claim 1. The Office Action did raise an obviousness rejection based on claim 3 subject matter, but did not recite where an acid, much less a recited acid, was disclosed or suggested in Weber et al..

Also, adding a separate acid is directly contrary to a primary goal of the Weber et al. PCT publication, which seeks to avoid creating skin irritation problems for extremely sensitive persons. Hence, adding such an acid would not be something obvious from this reference.

~~It should also be noted that again, there is no teaching~~ of a residual beneficial antimicrobial activity which lasts even after the cleaning has been completed. This is a surprising and unexpected advantage.

Of course Weber et al. does not teach the use of furanones.

Again, Kjelleberg et al. does not teach the compatibility of chitosan and furanones, or teach the conditions under which both chitosan and furanone could have antimicrobial effectiveness. Further, nothing in the reference suggests that furanones could be used in compositions having residual antimicrobial effect. Also, Kjelleberg et al. does not address the pH/additional acid deficiency.

C. U.S. patent 5,776,876 and WO 99/53915

Garris and Kjelleberg et al. were not applied as against claim 6. Thus, Applicants assume that independent form claim 6 (as now amended) is therefore considered free of that art.

With respect to the other remaining claims:

Garris is directed to filter cleaners. The filter cleaners (as described in column 1 and 6 of this patent) are for cleaning particulate type filters (e.g. sand), and thus

(contrary to the Office Action's finding) are not "hard surface" cleaners.

Moreover, the claims now specify residual antimicrobial effects. This additional subject matter is not taught or suggested by Garris. Since the main purpose of Garris' filter cleaners was to remove clogging materials, one would not have looked to that reference for ways to provide residual effects. Hence, notwithstanding Garris, obtaining a residual antimicrobial effect would be highly unexpected.

Also, claim 7 requires a disinfectant. As noted at paragraph 24 of the present application, biguanides are a class of disinfectants. The main purpose of Garris is to remove biguanide deposits from filters (see the title of that patent). Hence, one would be directed away from adding even more of what would be considered the class of the contaminant to a cleaner designed to remove that type of contaminant. While the Office Action did apply the Garris reference to even claim 7 subject matter, it did not address the issue of disinfectant capability, much less adding a disinfectant in addition to a surfactant.

Again, nothing in Kjelleberg et al. cures many of the deficiencies for reasons analogous to those noted above.

Conclusion

The above amendments are believed to adequately distinguish the references of record. Claims 1-8 (as amended) are now believed to be in condition for allowance, and allowance is respectfully requested. No additional fees are believed to be required for entry of this amendment. However, should any additional fees be needed, please charge Deposit Account No. 17-0055 for the amount of the fees.

Respectfully submitted,
ROBERTA A WICK ET AL.

Date: November 17, 2003 By: _____

Carl R. Schwartz
Reg. No. 29,437

Quarles & Brady LLP
411 East Wisconsin Avenue
Milwaukee, WI 53202
(414) 277-5715

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